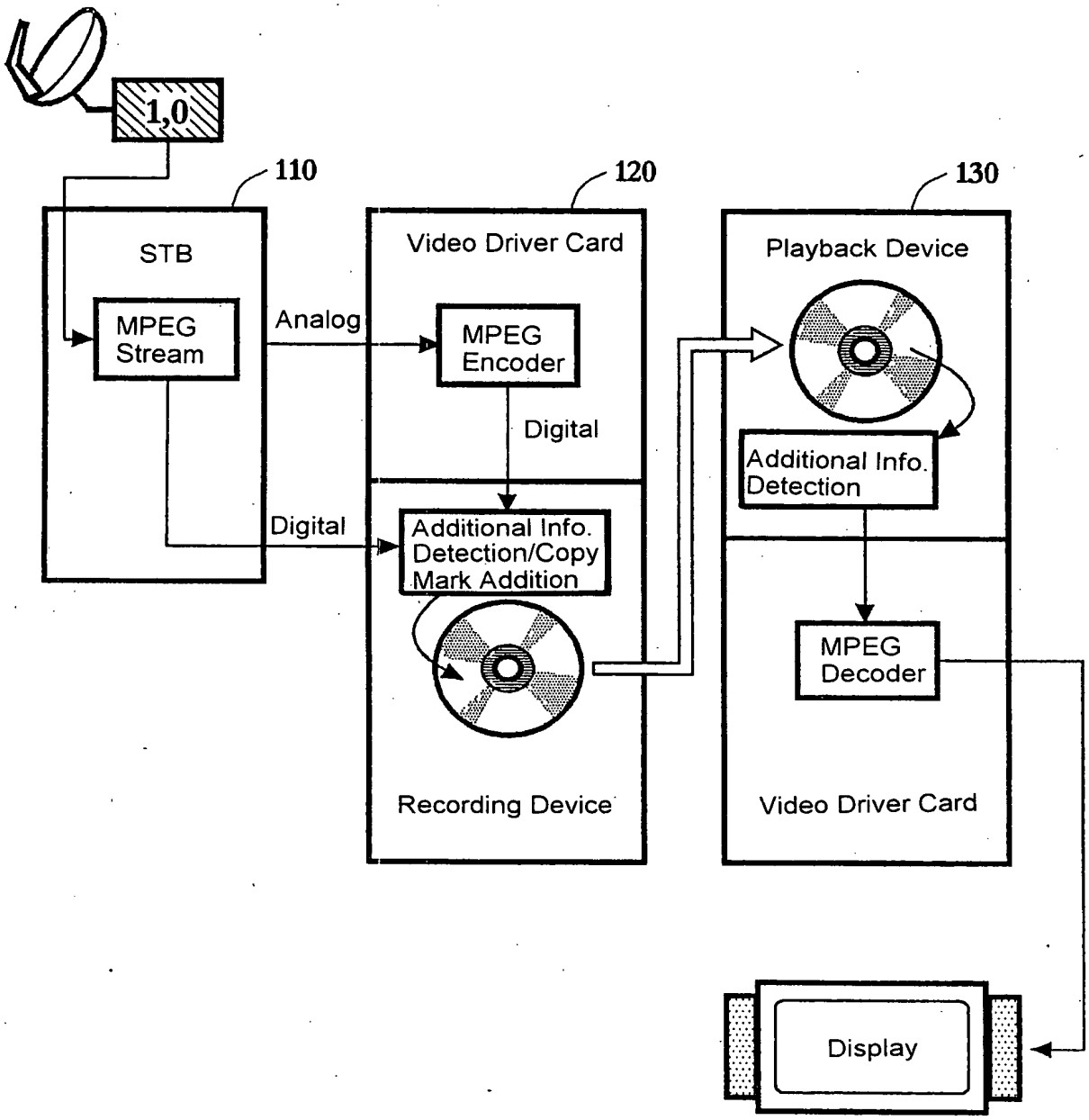
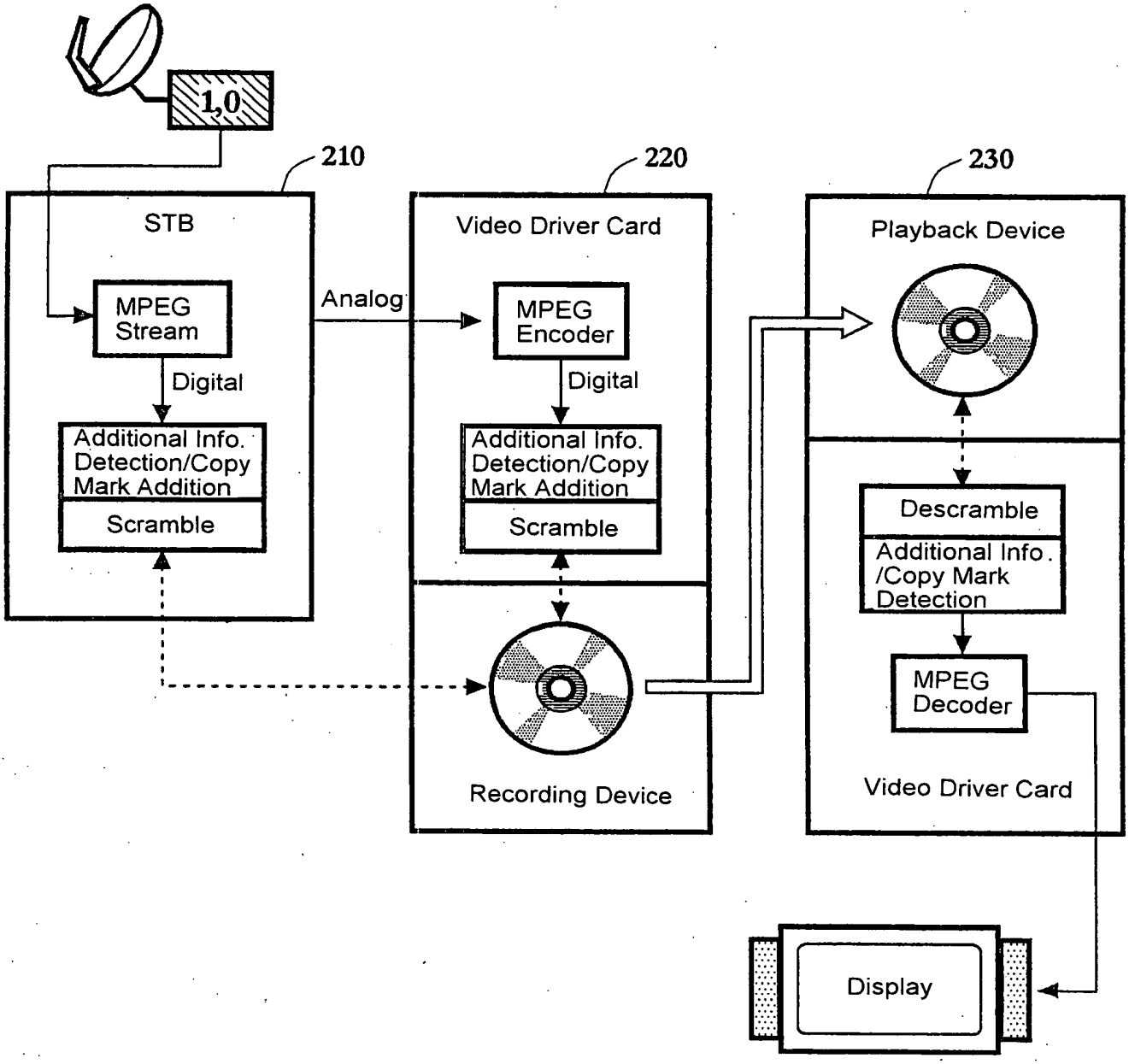
[Document Type] Drawing

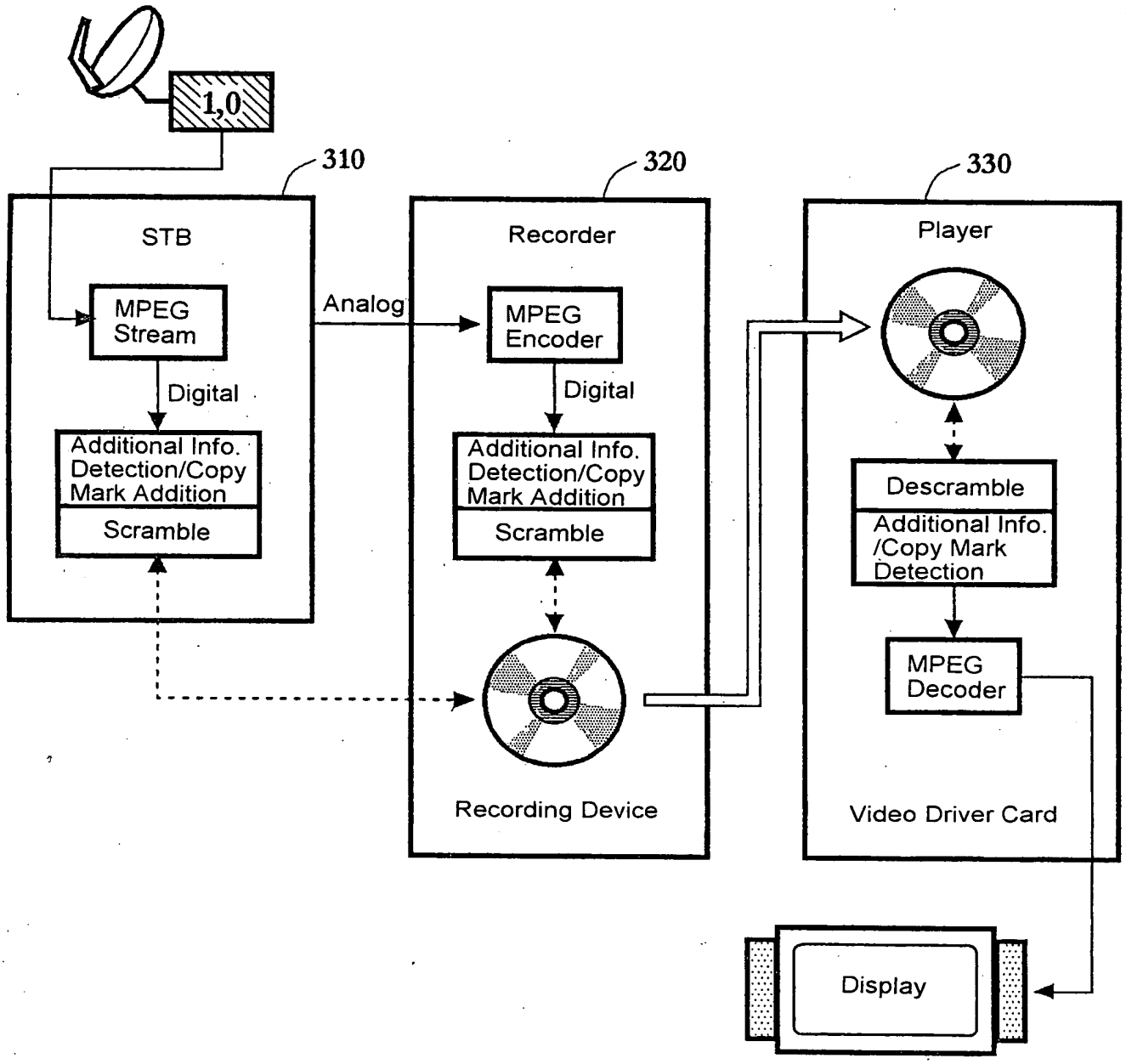
[Figure 1]



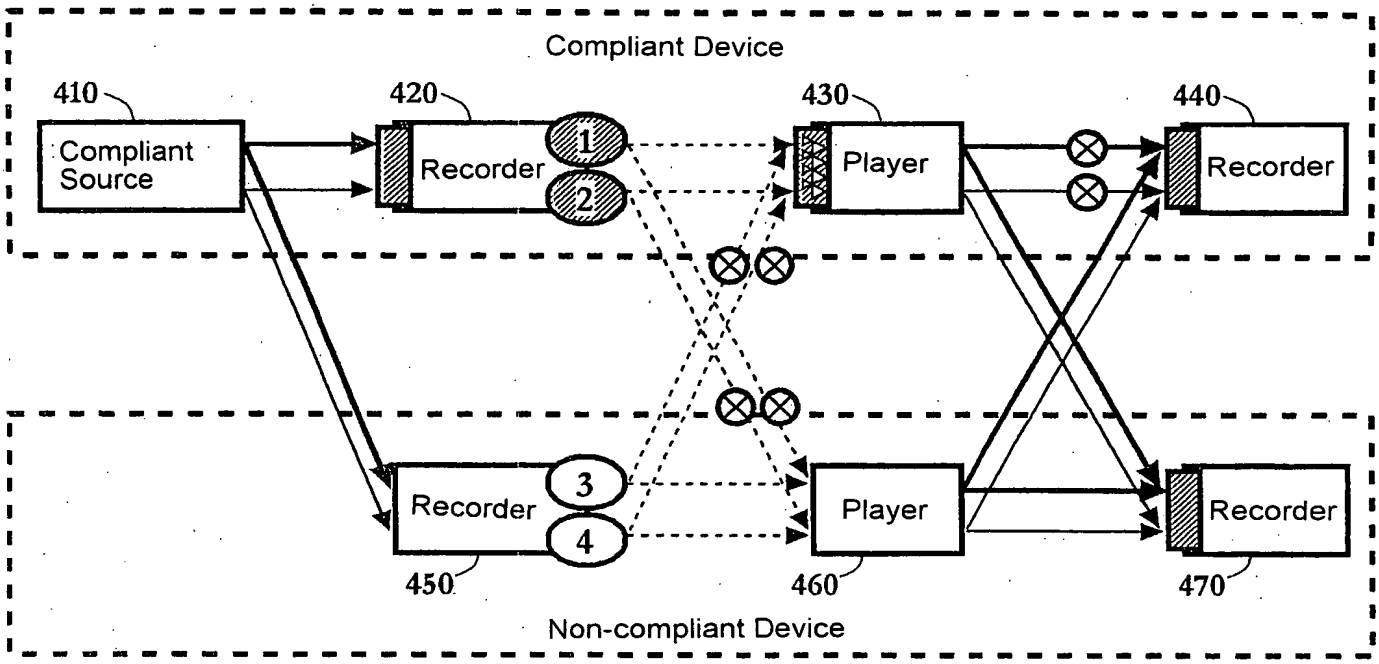
[Figure 2]

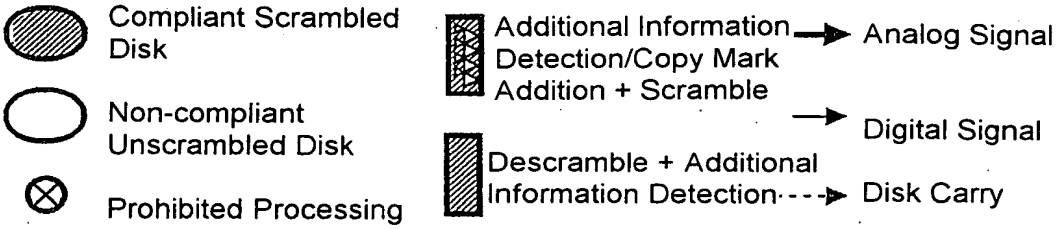

1,0
210
STB
MPEG Stream
Digital
Additional Info. Detection/Copy Mark Addition
Scramble
Analog
220
Video Driver Card
MPEG Encoder
Digital
Additional Info. Detection/Copy Mark Addition
Scramble
Recording Device
230
Playback Device
Descramble
Additional Info. /Copy Mark Detection
MPEG Decoder
Video Driver Card
Display

[Figure 3]

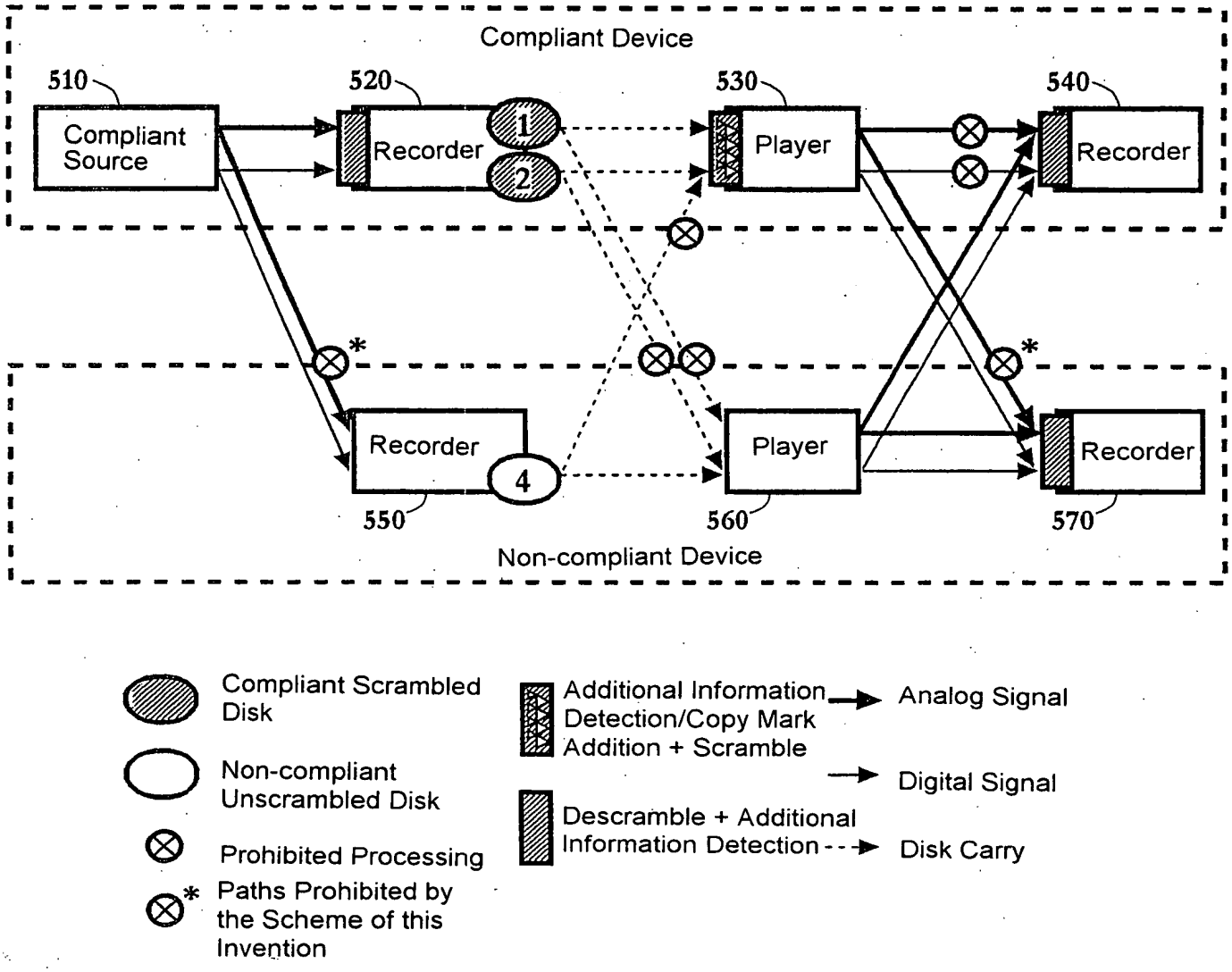

1,0
310
STB
MPEG Stream
Digital
Additional Info. Detection/Copy Mark Addition
Scramble
Analog
320
Recorder
MPEG Encoder
Digital
Additional Info. Detection/Copy Mark Addition
Scramble
Recording Device
330
Player
Descramble
Additional Info. /Copy Mark Detection
MPEG Decoder
Video Driver Card
Display

[Figure 4]

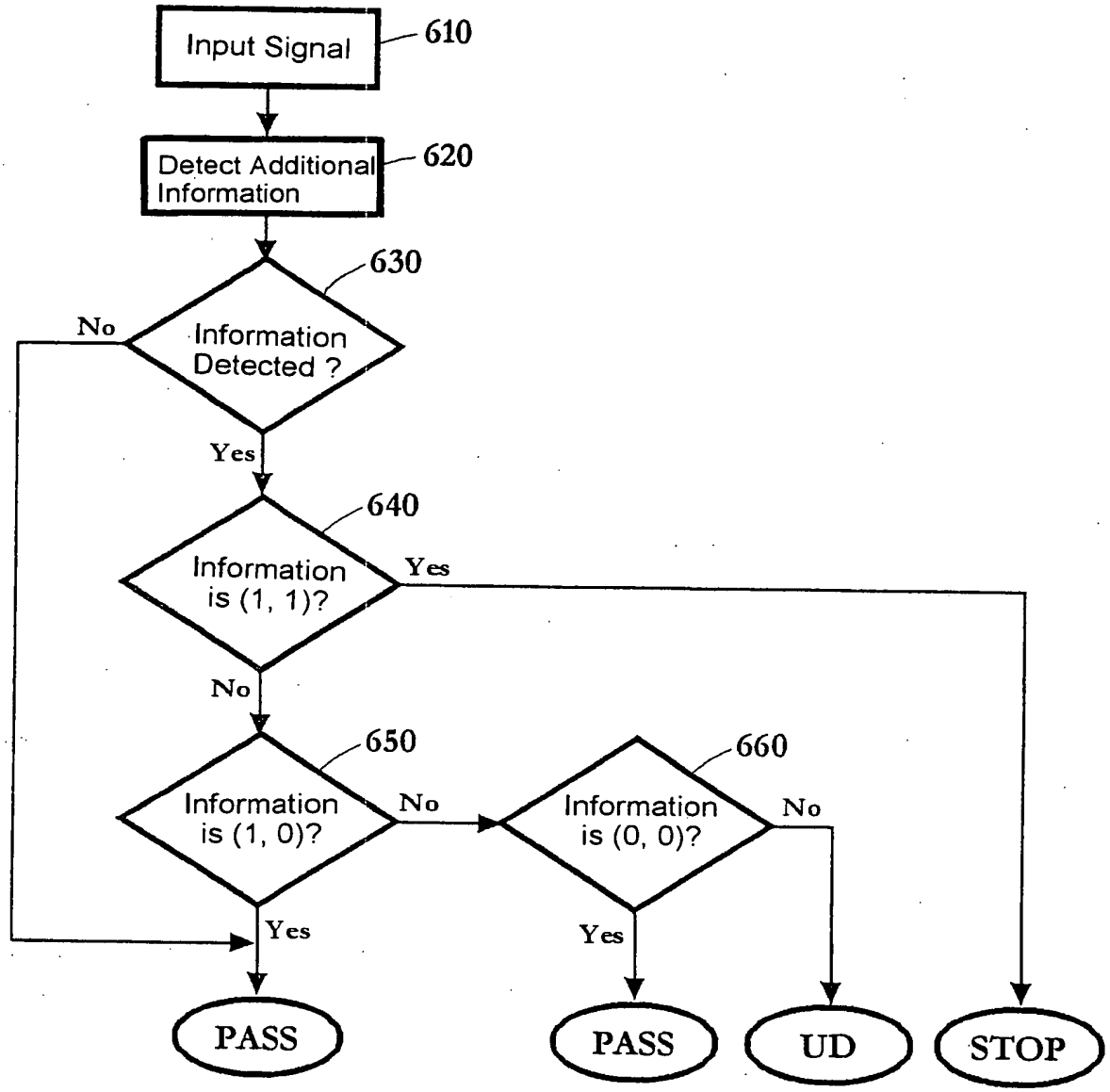

Compliant Device
410
Compliant Source
420
Recorder
1
2
430
Player
440
Recorder
Recorder
3
4
Player
Recorder
450
460
470
Non-compliant Device


Compliant Scrambled Disk
Non-compliant Unscrambled Disk
Prohibited Processing
Additional Information Detection/Copy Mark Addition + Scramble
Descramble + Additional Information Detection
Analog Signal
Digital Signal
Disk Carry

[Figure 5]


Compliant Device
510
Compliant Source
520
Recorder
1
2
530
Player
540
Recorder
*
Recorder
4
550
Player
560
Recorder
570
*
Non-compliant Device
Compliant Scrambled Disk
Non-compliant Unscrambled Disk
Prohibited Processing
Paths Prohibited by the Scheme of this Invention
Additional Information Detection/Copy Mark Addition + Scramble
Descramble + Additional Information Detection
Analog Signal
Digital Signal
Disk Carry

[Figure 6]

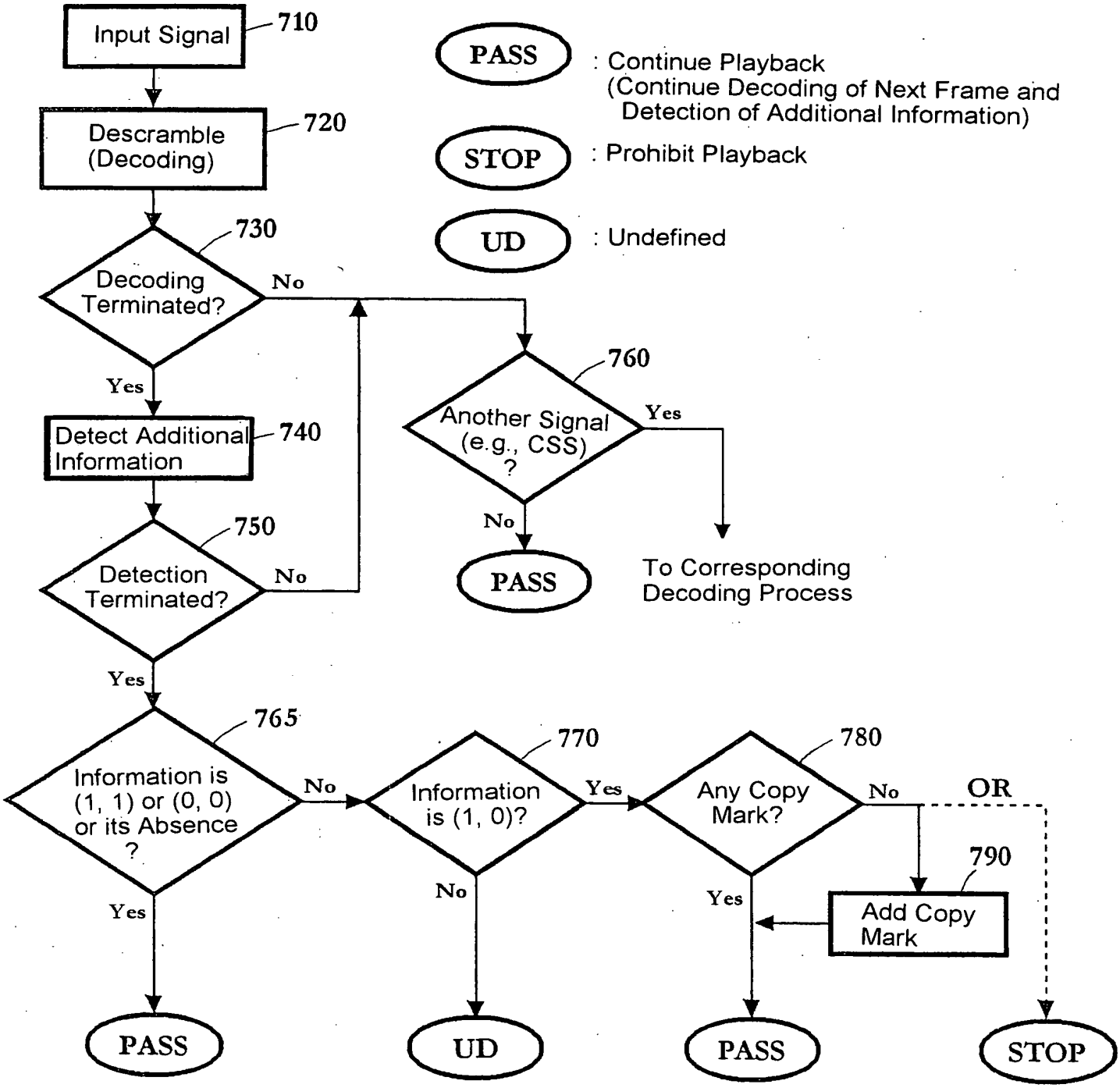


PASS : Continue Copying Process

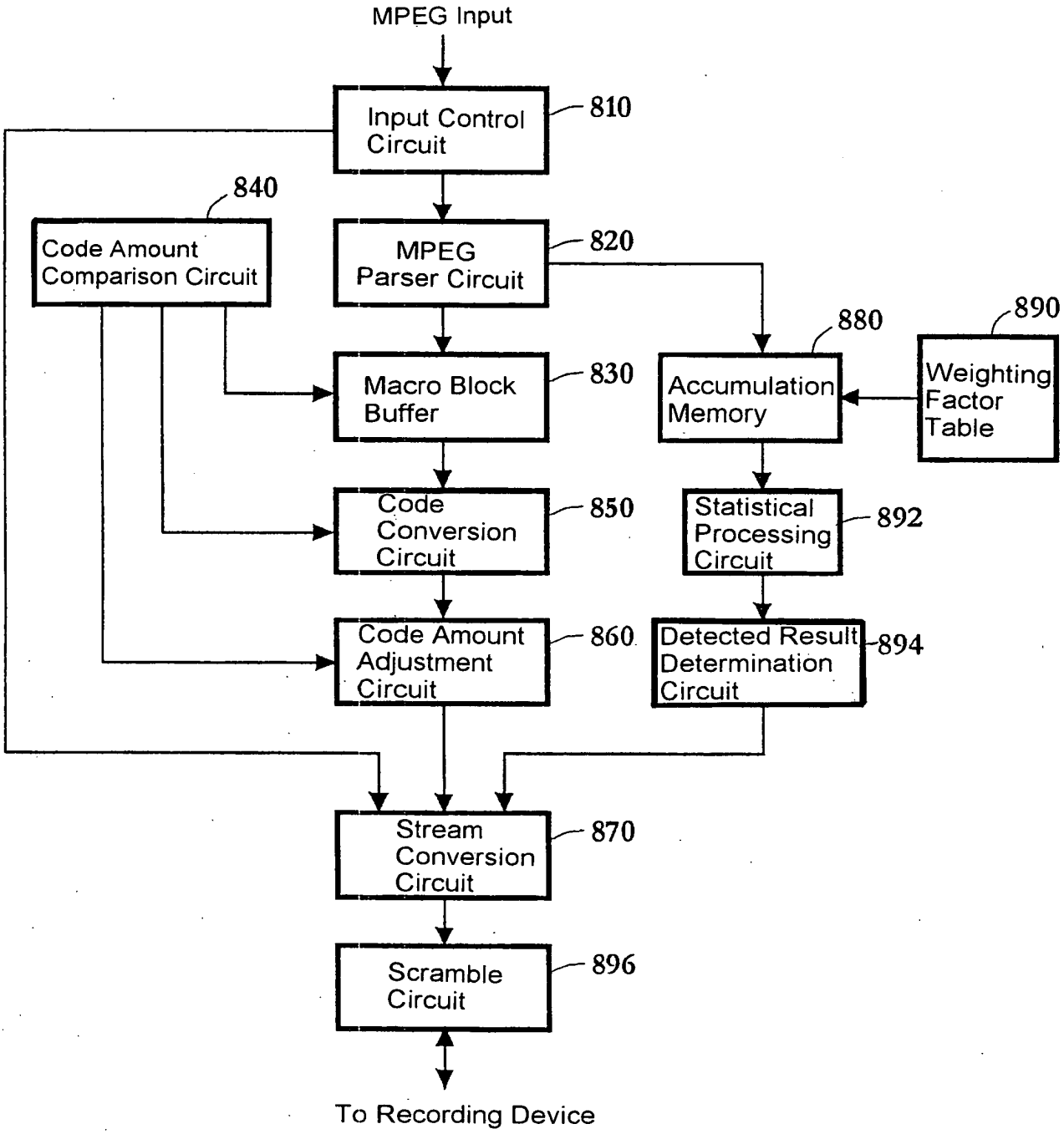
STOP : Prohibit Copying Process

UD : Undefined

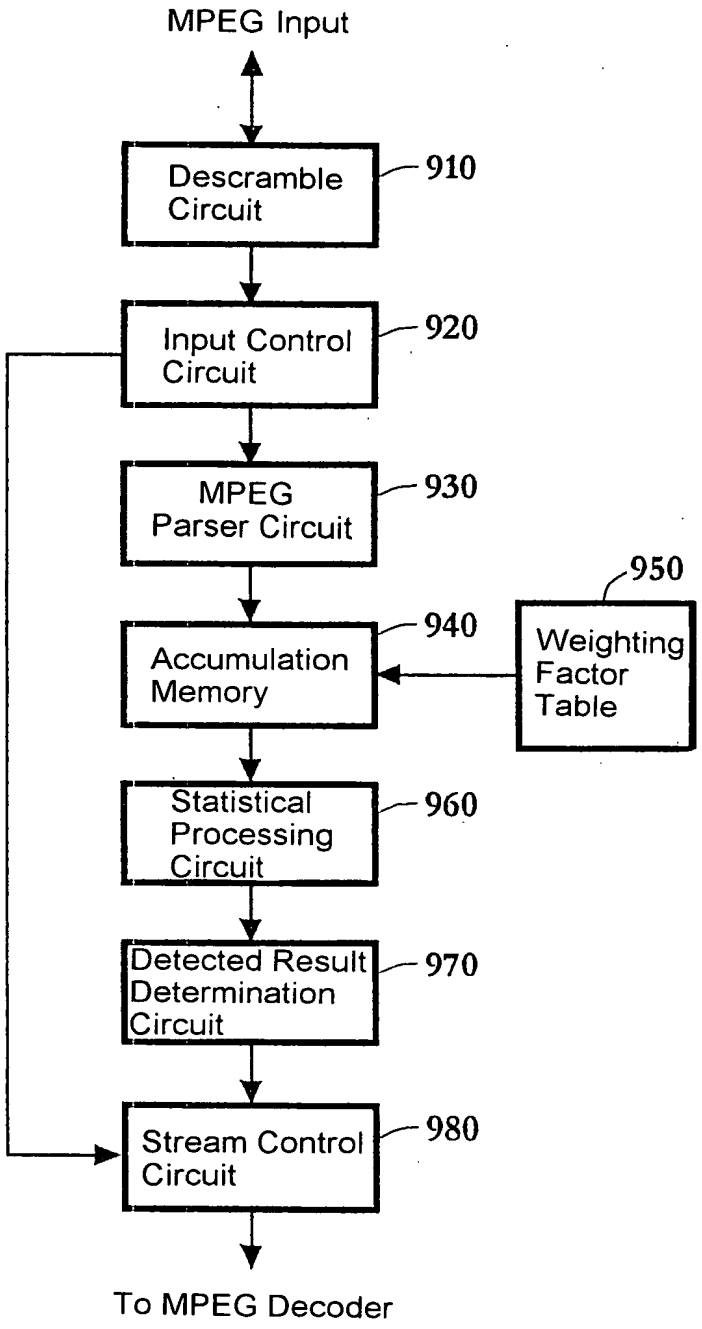
[Figure 7]


Input Signal
710
Descramble (Decoding)
720
Decoding Terminated?
730
No
Yes
Detect Additional Information
740
Detection Terminated?
750
No
Yes
Another Signal (e.g., CSS) ?
760
Yes
No
PASS
To Corresponding Decoding Process
Information is (1, 1) or (0, 0) or its Absence ?
765
No
Yes
PASS
Information is (1, 0)?
770
Yes
No
UD
Any Copy Mark?
780
No
OR
Yes
Add Copy Mark
790
PASS
STOP
PASS : Continue Playback (Continue Decoding of Next Frame and Detection of Additional Information)
STOP : Prohibit Playback
UD : Undefined

[Figure 8]


MPEG Input
Input Control Circuit
810
840
Code Amount Comparison Circuit
MPEG Parser Circuit
820
880
890
Macro Block Buffer
830
Accumulation Memory
Weighting Factor Table
Code Conversion Circuit
850
Statistical Processing Circuit
892
Code Amount Adjustment Circuit
860
Detected Result Determination Circuit
894
Stream Conversion Circuit
870
Scramble Circuit
896
To Recording Device

[Figure 9]


MPEG Input
Descramble Circuit
910
Input Control Circuit
920
MPEG Parser Circuit
930
950
Accumulation Memory
940
Weighting Factor Table
Statistical Processing Circuit
960
Detected Result Determination Circuit
970
Stream Control Circuit
980
To MPEG Decoder